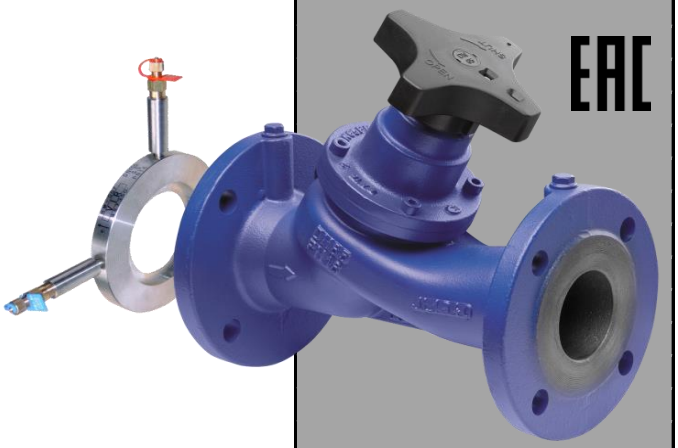
9565P

Cast Iron Double Reg. Valve And Stainless Steel Metering Station

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Variable orifice cast iron double regulating valve Fig.9555P
Flanged PN16 according to EN1092-2 (ex DIN2533)
Lengths according to EN558-1 series 1 (ex DIN3202 F1)
Alkyd/acrylic single layer waterpaint coating (50-100µm)
Stainless steel wafer metering station Fig.9450
For EN1092 PN16 flanges
Tolerance on nominal K_{vs} ±5% (test according to BS7350)
TR CU 010 compliant

PN16
Free of CE marking (cat. according to Art. 4.3 Dir. 2014/68/EU)

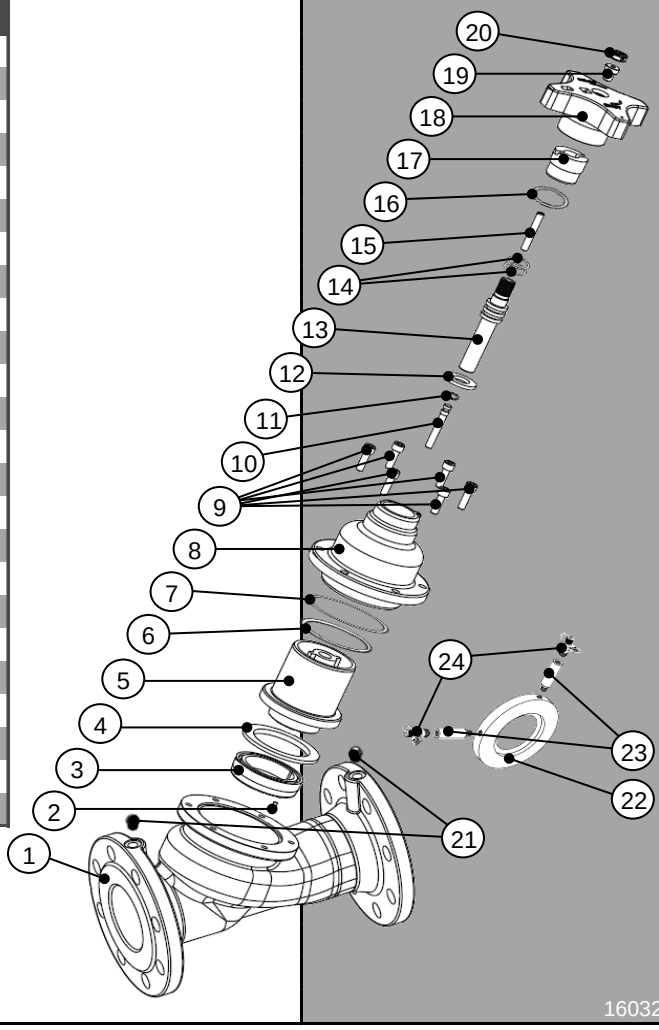


Working conditions

- Suitable for: water, -10°C to +110°C
  below 0°C only for water with added antifreeze fluids
  over 100°C only for water with added anti-boiling fluids
- Not suitable for: gases group 1 & 2, liquids group 1 (Dir. 2014/68/UE)

PARTLIST

N.	Part	Material	Norm
1	Body	Cast iron	EN-GJL-250 JL1040
2	Cone screw	Stainless steel	A2
3	Balancing cone	Composite material	-
4	Gasket disc	EPDM	-
5	Shutter	Composite material	-
6	Shut./bon. O-ring	EPDM	-
7	Body/bon. O-ring	EPDM	-
8	Bonnet[1]	Cast iron	EN-GJL-250 JL1040
9	Screws	Carbon steel	8.8 A2A
10	Memory stop	DZR Brass	EN12164 CW602N
11	Mem. stop O-ring	EPDM Perox	-
12	Washer	DZR Brass	EN12164 CW602N
13	Stem	DZR Brass	EN12164 CW602N
14	Stem O-ring	EPDM	-
15	Screw	Brass[2]	CW508L
16	Bushing O-ring	EPDM	-
17	Bushing	DZR Brass	EN12164 CW602N
18	Handwheel	Polyamide[3]	PA6.6
19	Handwheel screw	Brass[4]	CW508L
20	Cap	Polyamide	PA6.6
21	Plug	Steel[5]	C35E
22	Body	Stainless steel	AISI 316
23	Extension	Stainless steel	AISI 316
24	Test point	DZR Brass[6]	EN12164 CW602N



[1]Two-pieces bonnet (screwed) with EPDM gasket for DN65
Two-pieces bonnet with bottom part in ductile iron EN-GJS-500-7 JL1050 and 8.8 A2A steel joint screws for DN≥200
[2]X5CrNi18-10 steel for DN≥200
[3]CuZn40Pb2 brass screw and washer for DN≥200
[4]5 A2A steel for DN≥200
[5]Caps with carbamide rubber gaskets
[6]Test points with EPDM gaskets and polypropylene ties

160329

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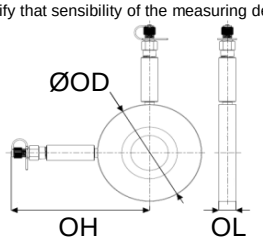
DIMENSIONS

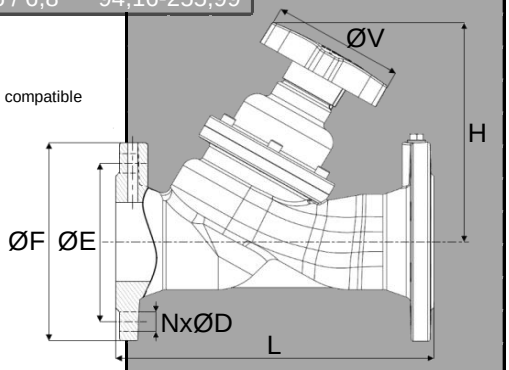
DN	ØF [mm]	ØE [mm]	NxØD [mm]	L [mm]	H [mm]	ØV [mm]	OH [mm]	OL [mm]	ØOD [mm]	Weight[1] [kg]	Flow range[2] [l/s]
065	185	145	4x19	290	215	130	154	18	127	13,4 / 1,5	3,02-6,95
080	200	160	8x19	310	220	130	162	18	143	17,8 / 1,8	6,40-15,36
100	220	180	8x19	350	240	130	172	18	163	22,7 / 2,0	10,85-26,04
125	250	210	8x19	400	260	130	187	18	193	34,0 / 2,6	16,85-39,75
150	285	240	8x23	480	285	130	200	18	219	48,5 / 3,0	23,71-56,91
200	340	295	12x23	600	480	310	227	18	274	114,5 / 4,1	41,86-100,47
250	405	355	12x28	730	525	310	255	18	330	159,0 / 5,4	66,58-156,78
300	460	410	12x28	850	535	310	283	18	385	210,5 / 6,8	94,16-255,99

[1]VIR Fig. 4325G butterfly valve weight / VIR Fig. 9450 metering station weight

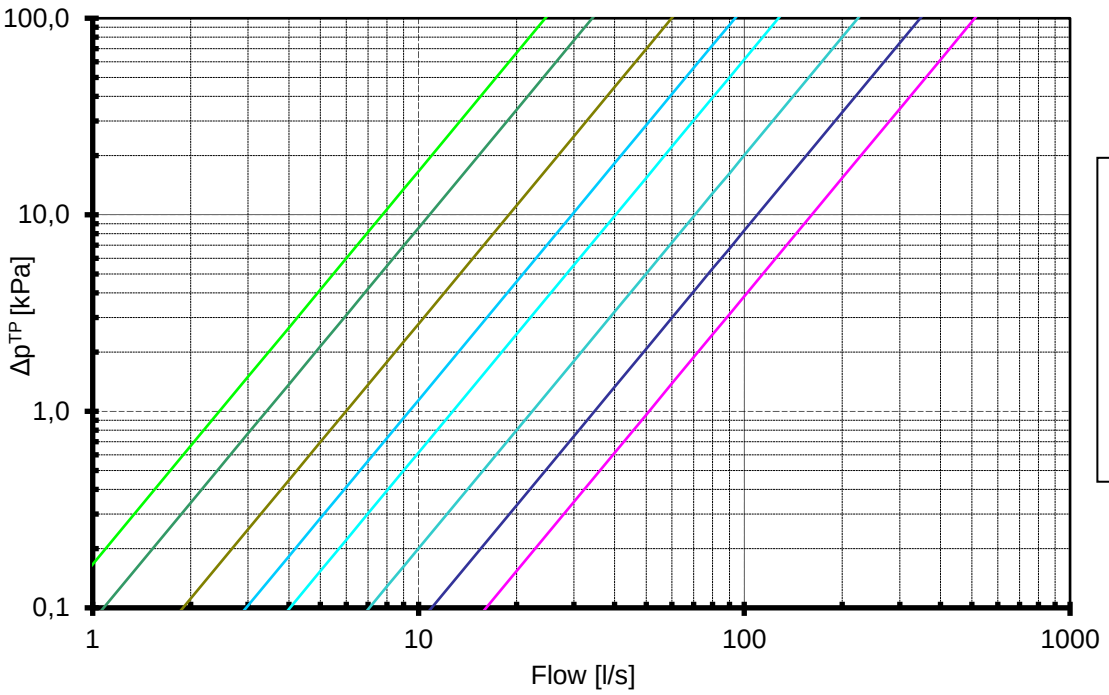
[2]Suggested flow range applicability (BS7350)

If used with measuring manometers different from those proposed by VIR please verify that sensibility of the measuring device is compatible with indicated minimum flow (see flow measurement paragraph)





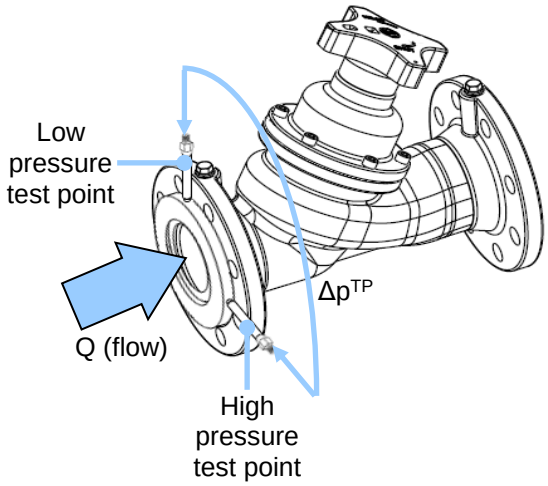
FLOW MEASUREMENT



- DN65, K_{vs} 88,2
- DN80, K_{vs} 123,0
- DN100, K_{vs} 215,6
- DN125, K_{vs} 336,9
- DN150, K_{vs} 458,6
- DN200, K_{vs} 803,9
- DN250, K_{vs} 1249
- DN300, K_{vs} 1836

$$Q = \frac{K_{vs} \cdot \sqrt{\Delta p^{TP}}}{36}$$

Formula linking flow Q (in l/s) and Δp measured at test points (in kPa).
Minimum flow that can be measured for each diameter may be calculated by using in the formula minimum Δp that can be measured by used manometer.
Valves are anyway designed for best performances when used on range previously suggested and as indicated by BS7350.

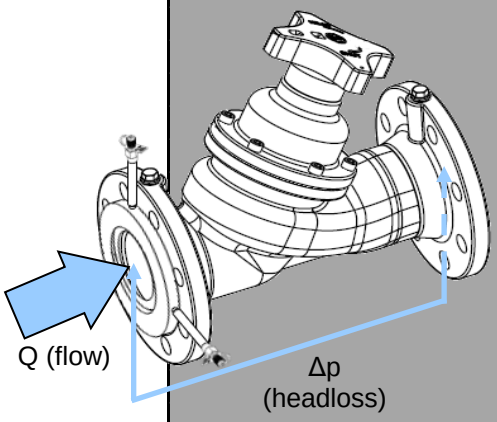


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HEADLOSS CALCULATION

Handwheel position	K_v [m³/h @ 1bar]							
	065	080	100	125	150	200	250	300
1,0	21,6	7,9	9,6	13,0	14,8	38,6	62,3	57,1
1,5	26,0	9,9	12,8	17,8	19,1	45,6	73,1	72,2
2,0	30,5	11,8	16,6	23,7	29,7	54,6	87,2	89,8
2,5	34,8	13,8	22,9	33,0	51,7	71,1	115,6	110,1
3,0	38,8	16,7	33,9	51,0	83,2	99,7	163,4	140,6
3,5	42,6	21,8	50,0	76,3	130,1	147,8	237,7	201,6
4,0	46,9	30,9	70,1	104,7	178,8	213,7	341,0	329,9
4,5	50,2	45,0	88,3	132,0	211,3	278,4	441,9	494,2
5,0	53,8	62,5	103,1	154,8	235,6	331,7	526,9	622,0
5,5	59,3	75,0	115,5	173,3	257,9	373,9	597,7	714,6
6,0	64,9	83,1	126,8	190,2	278,5	411,5	660,7	798,9
6,5	68,4	88,8	137,4	206,3	297,1	447,5	721,3	886,7
7,0	71,0	93,5	146,7	220,8	313,3	477,8	769,6	969,8
7,5	73,6	97,6	154,2	233,2	327,4	500,6	812,0	1040
8,0	76,6	101,4	160,2	244,3	339,3	521,3	850,5	1098
8,5	-	-	165,1	254,6	348,9	544,6	888,2	1148
9,0	-	-	-	-	-	567,3	924,1	1192
9,5	-	-	-	-	-	586,8	957,2	1235
10,0	-	-	-	-	-	603,5	987,4	1278
10,5	-	-	-	-	-	619,0	1015	1320
11,0	-	-	-	-	-	634,6	1041	1361

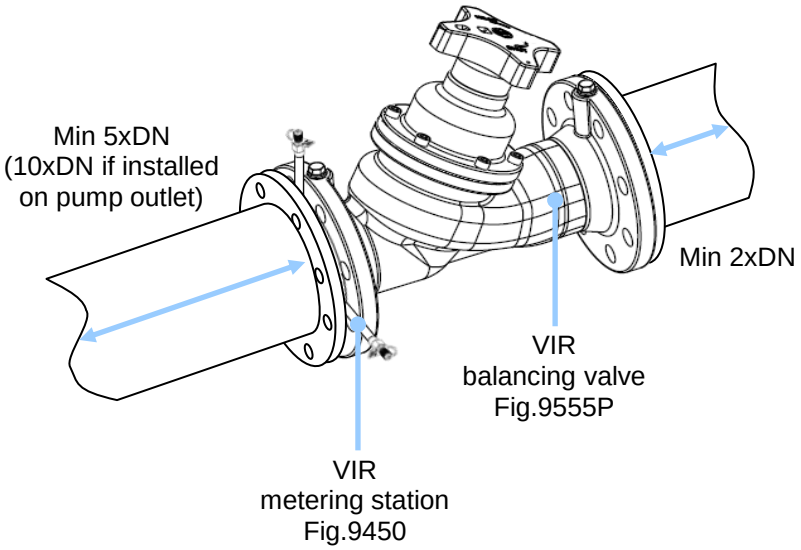


$$\Delta p = \left(\frac{36 \cdot Q}{K_V} \right)^2$$

Formula linking flow Q (in l/s) and theoretical valve headloss Δp (in kPa).
K_v depends on handwheel position as indicated on table.

INSTALLATION

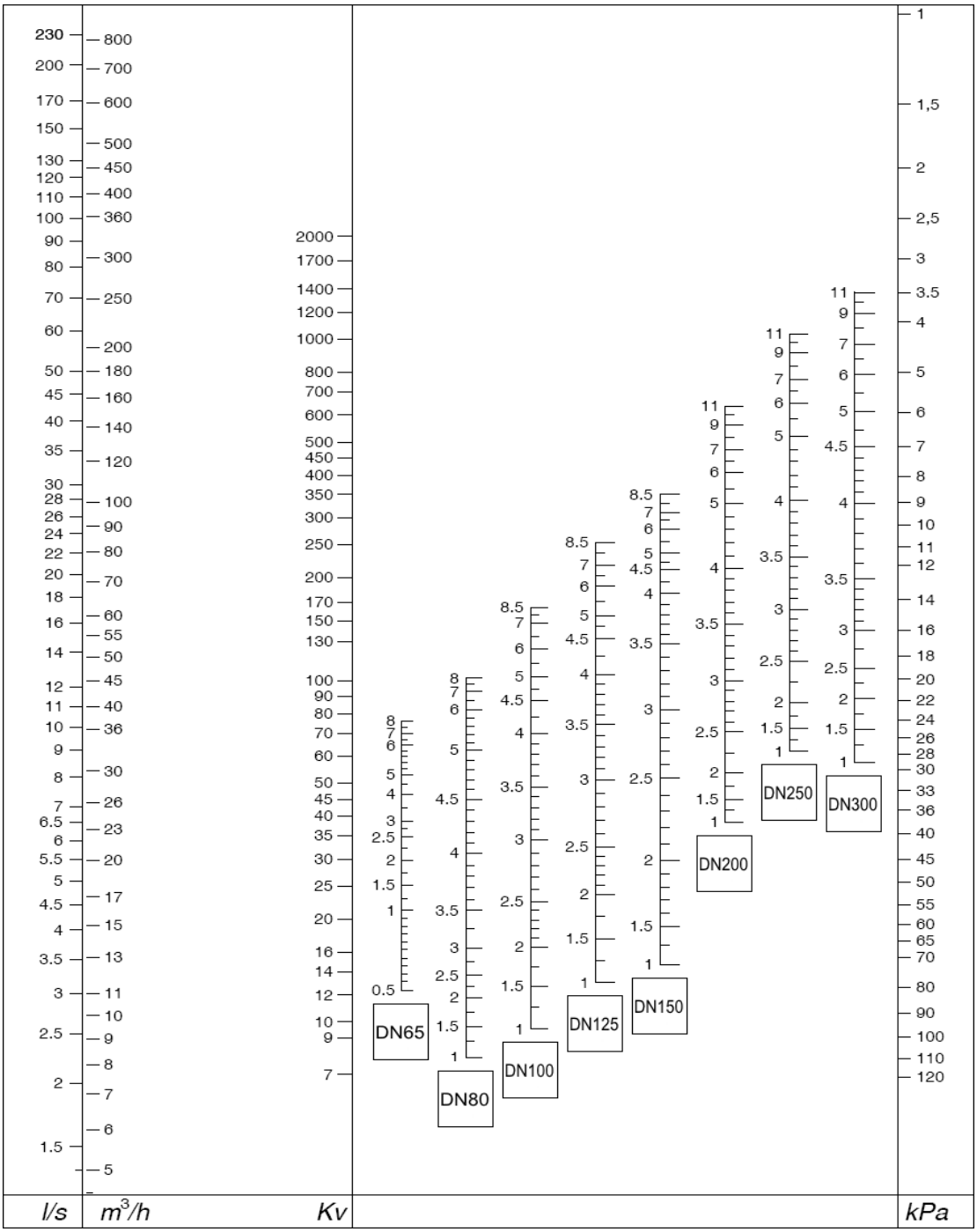
To obtain the best performances valve must be installed on a pipe with its same nominal size preceded and followed by straight pipe lengths as per figure indications.



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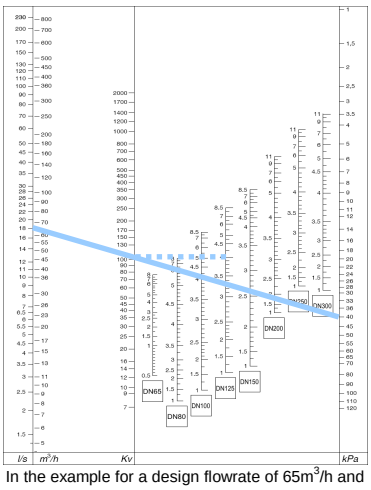
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PRESETTING



By using diagram above is possible to esteem the presetting position of the valve with given design flowrate and headloss:

1) draw a straight line joining design flowrate and design headloss;
2) determine design K_v value as intersection of drawn line and K_v axis;
3) draw a straight horizontal line from intersection previously identified and the specific valve DN Axis;
4) intersection determines handwheel position to use for presetting.



In the example for a design flowrate of 65m^3/h and design Δp 40kPa handwheel position of 4,0 is determined for a DN125 valve

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